

## **REMARKS**

Claims 1 and 3-13 remain in the application. Independent claims 1, 5 and 9 were amended to include the following elements:

instrumentation computing a cost for each selectable implementation for at least one use of the component during said partial run, said computation being based on the current state of the run; and

based on the cost, selecting at runtime one of the plurality of selectable implementations for a subsequent at least partial run of the computer program, said one of the plurality of selectable implementations selected being the one with the lowest cost.

### **CLAIM REJECTIONS UNDER 35 USC §101**

The Office Action rejected claims 5-11 and 13 under 35 USC §101 as not limited to statutory embodiments. Claim 5 has been amended to recite a computer readable storage medium. Support for this amendment is found at page 22, lines 1-2 of the specification. Applicant submits that the emended claim recites statutory subject matter. Claim 9 has been amended to specify that the computer system comprises a processor for running a method. Support for this amendment is found at page 20, lines 19-21 of the specification.

### **CLAIM REJECTIONS UNDER 35 USC §112**

Claim 1 has been amended to correct the antecedent basis issue.

### **CLAIM REJECTIONS UNDER 35 USC §103**

The Office Action rejected claims 1-13 under 35 USC 103(a) as being unpatentable over “Dynamic Program Monitoring and Transformation Using the OMOS Object Server” by

Orr et al. ("Dynamic Program Monitoring") in view of "Program Specialization Using the OMOS System" by Orr et al. ("Program Specialization").

The claims differ from the cited combination because the combination of "Dynamic Program Monitoring" and "Program Specialization" only comprises "logs information about entry and exit to the procedure," "construct a dynamic call graph of the program from the event log file", and "a node for each instance of a procedure that is called, and an arc from the caller to the callee" (all on page 236 of "Dynamic Program Monitoring"). The cited combination does *not* capture, and does *no* cost computation based on, the *current state of the run* at entry to a procedure or use of a component, as required by the amended claims.

The claimed cost computation, for each implementation, for at least one use of the component, takes into account the current state of the run. An example of current state is: the size of data in the abstract state of the object. An example of abstract state is: the size / number of elements in a data collection regardless of whether it is implemented with a tree or a hash table or list. The claimed cost computation also takes into account the parameters (argument values) of the procedure call or use of the component. Due to the fact that the claimed cost computation is based on the current state of the run, the computed cost for a call of a particular procedure or invocation of a given operation / method of a given implementation can vary depending on the current state of the run. For example, the more elements there currently are in a collection, the greater the cost can be of inserting another element into that collection; and that cost can be greater or not as great depending on the particular implementation. The cited combination does not take this into account and hence the cost computed by the cited

combination never varies. The cited combination will compute an identical cost for all calls of a particular procedure or invocations of a given operation / method of a given implementation. This is inadequate for purposes of the claimed invention.

In the amendment filed on April 3, 2007 Applicants pointed out that the cited references actually constitute objective evidence of non-obviousness (i.e., failure of others). The Final Office Action ignored this evidence. Applicant urges the Examiner to consider the objective indicia of non-obviousness. Objective evidence of non-obviousness *must* be considered when present (as here). *Hybritech inc. v. Monoclonal Antibodies, Inc.* 802 F.2d 1367 (Fed. Cir. 1986).

Claims 3-4 and 12-13 are dependent on claim 1 and are patentable for at least the foregoing reasons.

Claim 5 is an article of manufacture counterpart of claim 1 and is patentable for the foregoing reasons.

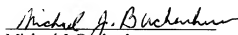
Claims 6-8 are dependent on claim 5 and are patentable for at least the same reasons.

Claim 9 is a computer system that comprises limitations substantially the same as those argued above.

Claims 10 and 11 depend on claim 9 and are patentable for at least the same reasons as claim 9 is patentable.

For the foregoing reasons, Applicant respectfully requests reconsideration and allowance of the pending claims.

Respectfully submitted,

  
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